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| 10/622,668      | 07/21/2003  | Yasuhiro Yoshioka    | FSF-031391          | 3824             |

7590

03/15/2005

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| EXAMINER |
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CHEA, THORL

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| ART UNIT | PAPER NUMBER |
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1752

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/622,668

Applicant(s)

YOSHIOKA ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language “The reducing agent which forms a dye has higher activity than that of the reducing agent which does not form a dye so that the reducing agent which forms a dye has a higher logarithmic value (-LogE) of an exposing amount E giving the concentration 1.5 than that of the reducing agent which does not form a dye” is confusing as it is unclear whether -LogE is 1.5 or E is 1.5 or the logarithmic value of the (-LogE) of the dye that formed is dye is 1.5 higher than of the reducing agent which does not form a dye. The activity of the dye cannot be determined from this limitation.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cerquone et al (US Patent No. 4,021,240). See the material in the abstract, and column 25-30 wherein the material contains photographic silver halide, silver salt oxidizing agent, binder, reducing agent and a coupler; see also column 6, lines 30-68 which discloses the use of the reducing agent that does not adversely affect the desired color image such as phenolic leuco dye reducing agent. It is believed that the reducing agent react with silver salt oxidizing agent to produce a desired dye in the imagewise exposed area of the photothermographic element, and the latent image silver produce upon imagewise exposure catalyzes the reaction between the reducing agent and the silver salt oxidizing agent. Accordingly, the worker of ordinary skill in the art would have envisaged that the use of a reducing agent for silver salt oxidizing agent is necessary to catalyzes the reaction the reaction between the reducing agent and the silver salt oxidizing agent is necessary, and would have used thereof in the photothermographic material, and therefore, anticipate the material of the claimed invention. Alternatively, the worker of ordinary skill in the art at the time the invention was made to the color reducing agent taught therein with an expectation of achieving a similar material. The color developing agent react with color coupler, but not with silver salt reducing agent. Therefore, it has activity higher than that of reducing agent for silver salt oxidizing agent with respect to color coupler.

6. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 10096310 (EP'310).

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The EP'310 discloses a photothermographic material substantially as claimed. See the phenol compound on page 3, compound (I) and the description of -L- and R1 to R8 on page 5 such as L is  $-\text{CHR}^9-$ , R9 is hydrogen or alkyl; R1, R8 represent secondary alkyl group or a tertiary alkyl group; R2, R4, R5, R7 represent hydrogen, halogen, or an alkyl group, more preferably hydrogen; R1, R3, R6, R8 represent an alkyl group, more preferably, a primary group having 1-20 carbon atoms, a secondary alkyl group having 3-20 carbon atoms, or tertiary group having 4-20 carbon atom, and the substituent thereof includes alkoxy group, aryloxy group, hydroxyl group, acyloxy group, amino group, heterocyclic group. See also the compound on page 9, I-22 that contains  $-\text{CH}_2\text{OCH}_3$ ; compound (I-24) on page 10; the compound (I-12) on page 8. see the other additive such as compound having phosphoryl group on pages 20-34; the halogenated compound on pages 60, [0242], [0243]; the amount of reducing agent on pages 11, [0039], [0040]; the amount of silver salt on page 35, [0074]; the toning agent and the ultrahigh contrast developer on page 41; the hydrazine derivative on page 49, [0167], [0168]; and time and temperature processing on page 53, [0210]. The EP'310 differs from that of the present claimed invention is the combination of agents of two reducing agents comprising a reducing agent which does not form a dye during thermal development and the reducing agent which forms a dye during thermal development, and the reducing agent which forms a dye has higher activity than that of the reducing agent which does not form a dye, but the reducing agents of the claimed invention are within the scope of the compound of formula (I) on page 3 of EP'310 on page 3, described above. The properties with respect to the formation with a dye are considered as inherent to the reducing agent of the EP'310. The reducing agent taught in EP'310 provide a photothermographic material with sufficient image density and image storage stability could be

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remarkably improved without substantially degrading the reducing property. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use one or more compound within the scope of formula (I) of EP'310 with an expectation of achieving a highly useful material with sufficient image density and image storage stability could be remarkably improved without substantially degrading the reducing property, and thereby provide a material as claimed.

***Response to Arguments***

7. Applicant's arguments filed December 29, 2004 have been fully considered but they are not persuasive because of the rejection set forth above. There is no difference in the invention as claimed in claims 1, 17 from the teaching of Cerquone et al. The invention as claimed encompasses the color heat developable material taught in Cerquone. Cerquone et al may not discloses the limitation such as reducing agent which forms a dye has higher activity than that of the reducing agent which does not form a dye so that the reducing agent which forms a dye has a higher logarithmic value (-LogE) of an exposing amount E giving the concentration 1.5 than that of the reducing agent which does not form a dye presented in the claimed invention, but this property is considered to be inherent to dye taught therein since there are type of reducing agent taught in Cerquone, one is reducing agent for silver ion and the other is color developing agent which is formed a dye. Therefore, the activity with respect to the dye is different. The reducing agent acts as reducing for silver ion would not form a dye, therefore there is no activity associated therewith, while the color developer has an activity of forming a dye, and its activity toward the dye is considered as higher which meet the requirement presented in the claimed invention.

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The applicants argue EP '310 teaches a photothermographic material which may contain two or more of the compounds represented by general formulae (R1) or (R2) of the present invention. However, EP'310 fails to teach the combination of the compounds represented by each of formulae (R1) and (R2), wherein the compound represented by formula (R2) satisfies the requirement of the "higher logarithmic value of an exposing amount E giving the concentration 1.5" in comparison to the compound represented by formula (R1), as defined in amended claim 1 of the present invention. This feature of the present invention allows improvement of the color tone of a silver image to be obtained. In comparison to the compound represented by general formula (R2), the compound represented by general formula (R1) remains colorless as it does not react as is shown in the above yellow color-forming mechanism. The compound represented by formula (R1) mainly acts as a reducing agent.

It is the Examiner's position that EP'310 discloses the compound within the scope of reducing agent R1 and R2 claimed in the claimed invention, and these compounds act as reducing agent for silver ion. The compound used in the reducing system as claimed has been known as reducing agent for silver ions such as taught in EP'310. It would have expected to the worker of ordinary skill in the art at the time the invention was made to use one or more compound within the scope of "o-polyphenol compound" taught in EP'310 within an reasonable expectation of providing the material of EP'310 with silver image. "It is prima facie obvious to combine two compositions each of which taught by the prior art to be useful for the same purpose in order to form a third composition to be used for the same purpose. In re Kerhoven, 205 USPQ 1069, 1072 (CCPA 1980)." Use of this developer with another disclosed developers which perform the same function would have been obvious to one of ordinary skill in the art. In re Crockett, 126 USPQ

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186. "A prima facie case of obviousness may be made when chemical compounds have very close structural similarity and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties."

In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991)." In this present invention the developers as claimed have been known in EP'310, and it would have been found prima facie obvious to the worker of ordinary skill in the art to use one or more compound as reducing agents with an expectation of producing silver image material.

The reaction mechanism shown in the response is not evidenced. There is nowhere in the specification disclosure showing that reducing agents react one with another to form yellow color. Also, the argument with the superior results is not persuasive since it is based on the Counsel's assertion. Counsel's arguments cannot take the place of evidence. In re Greenfield, 571 F. 2d 1185, 197 USPQ 227 (CCPA 1978).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after



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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *tlh*  
March 5, 2005

*Thorl Chea*  
Thorl Chea  
Primary Examiner  
Art Unit 1752